

BULLETIN UNIVERSITY OF MONTANA,
No. 18.
BIOLOGICAL SERIES No. 6.

ADDITIONAL NOTES
TO
Summer Birds of Flathead Lake,
WITH SPECIAL REFERENCE TO
SWAN LAKE

BY
PERLEY MILTON SILLOWAY,
Principal Fergus County Free High School, Member American Ornithologists Union,
Author of "Some Common Birds," "Summer Birds of Flathead Lake," Etc.

WITH INTRODUCTION BY MORTON J. ELROD.

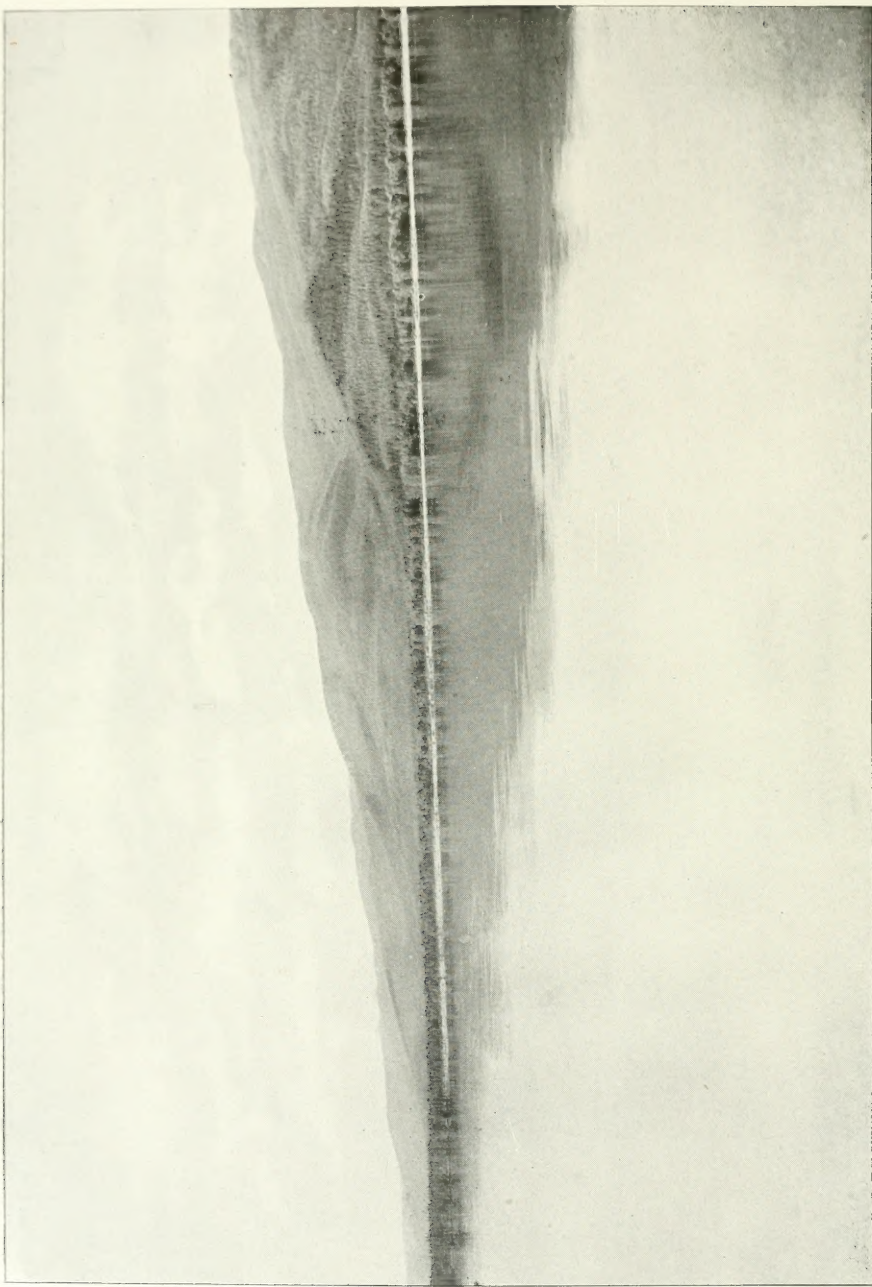
PREPARED AT THE UNIVERSITY OF MONTANA BIOLOGICAL STATION, BIGFORK, MONT.,
UNDER DIRECTION OF MORTON JOHN ELROD.

University of Montana, Missoula, Montana, U. S. A.
1903.

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Upper end of Swan Lake, showing the swampy shore and wooded slopes of Mission Range. Photo in July by M. J. Elrod.
The view is S. W.

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Introduction.

The notes presented in this bulletin, when added to the bulletin "Summer Birds of Flathead Lake," University of Montana Biological Series No. 1, include the work on ornithology during the summers of 1900, 1901, 1902 and 1903. Three seasons having been spent in the Mission Mountains, on the Flathead Indian Reservation, and along the shores of Flathead lake, it was thought best to extend the observations in the summer of 1903. Prin. Silloway was therefore recommended to spend a portion of the time in the vicinity of Swan lake.

This lake is a beautiful sheet of water, cradled between two ranges of mountains, with wooded slopes to the water's edge. It is primitively wild, with miles of woodland, interspersed occasionally with open glades.

Only a few hardy pioneers have entered the region. The birds have thus not been molested by man, and a visit to the region gave opportunity for study not heretofore made.

The illustrations here given are as faithful a portrayal of the region about Swan lake as can be made with the camera. Plate LIII shows the region to the southeast, with the Mission range in the background. The mountain slopes to the low summits are covered with a dense forest. Bordering the lake may be seen a fringe of willows, back of which are the cottonwoods and alders, and lastly the conifers. A large area bordering the water is swampy, shown in Plates LIV and LV. It is exceedingly difficult to get around in this region. Plate LVI shows the location of the lake with regard to the mountains, while Plate LVII shows a large portion of the wooded valley south of and above the lake. With the exception of a section of country including the lower portion of the lake as shown in Plate LV all of the country shown in the photographs is in the Lewis and Clarke forest reserve.

The notes here presented by Prin. Silloway contain several important features worthy of special mention. One point is the calamity that often befalls the old birds or the young. Another is the fact that birds occupy unfinished nests, which contain eggs. This latter may be due to the laziness or shiftlessness on the part of the mother, or to her inexperience, which prevents rapid working, or to the destruction of a first nest. The finding of a nest of the Willow thrush, which ordinarily builds close to the ground, six and one-half feet up in a tree, will be of interest to students of animal intelligence, as illustrating the change of habit due to environment. The region overflows annually. Irregular habits of nidification were also found in the cedar waxwing. Indeed, the notes so carefully prepared show quite plainly great individuality in the construction of the nests.

Since Bulletin Biological Series No. 1, Summer Birds of Flathead Lake, is out of print it is considered advisable to print a list of the summer birds thus far discovered, which is appended. This list therefore includes all the summer birds which have been observed about Flathead lake, numbering 137.

MORTON J. ELROD.

Missoula, Mont., Sept. 19, 1903.

Further Notes on the Summer Birds of Flathead Lake.

The following notes are based upon observations made from May 30 to July 30, 1902. The first three weeks of June were spent at the head of Swan lake; the remainder of the time was given to observation in the immediate vicinity of the Biological Station. As a supplement to the notes made during the seasons of 1900 and 1901, which were reported in the bulletin entitled "The Summer Birds of Flathead Lake," issued under the direction of the University of Montana Biological Station, these further notes are deemed worthy of publication. Several important species, overlooked in the previous seasons, were noted in 1902; and as a complete record of our observations for the region is desirable, the notes herein given will serve to fill out somewhat that which was lacking in the larger bulletin. As previously stated, no attempt has been made to furnish a complete list of the birds of the Flathead region, but simply to report such observations as were made by our party during the collecting season; hence no authorities have been cited. It is merely intended to furnish a record of personal work that may be helpful to other observers.

SWAN LAKE.

Among the many little lakes which lend interest and beauty to the Mission, Swan, and other ranges of our Montana mountains, Swan lake is worthy of consideration because of many delightful features. It is an expansion of Swan river, or the Big Fork, the outlet of the lake into the river being about eight miles overland from the Biological Station, in a direction somewhat south of east. A very poor road, generally overflowed during the time of high water in the spring, but tolerably passable at other times, leads from the Station to the foot of the lake. Another road, generally in ordinary condition, follows a course around the bend of Swan river to the northward, thus furnishing access to the lake at all times, the distance over this road being about fifteen miles.

In its origin the lake bed is probably the result of glacial action, whereby in remote ages an irregular furrow was ploughed by the moving ice-mass. The situation is between the northern end of the Mission range and the southern end of the Swan range, and nearly parallel to the eastern shore of Flathead lake. From the tops of the Mission summits between the two lakes, both can be easily seen, the separating crests being not more than five or six miles in breadth.

Swan lake is said to be about twelve miles in length, and the average width is at least half a mile. The contour of the lake is formed by several successive slightly crescentic bays or enlargements. At its head it opens out into a nearly circular area about two miles in diameter, above which lies a large submerged region in the spring, though later it

becomes a meadow covered with a rank growth of coarse grass. The western side of the lake is bounded by gradual slopes of the dwindling Mission mountains, presenting vast areas of evergreen forest, part of which is in the domain of the Lewis and Clarke forest reserve. On the eastern side of the lake are the rugged, fire-swept, or rocky heights of the Swan range, rising quite abruptly from the water's edge.

The swampy area at the head of Swan lake was the scene of most of our activities during the first three weeks of June. At that time it was covered with dead water from two to four feet in depth most of the new growth not having yet appeared above the water. Here and there were patches of old reeds, browned and tangled, with a few green reeds struggling toward the light. In this swamp we found holboell's grebe in a small colony. American golden-eyes were leading forth their broods for their first practice on the water; a few yellow-headed blackbirds were hoarsely piping in the reeds. Overhead a pair of bald-headed eagles, the male a magnificent specimen with regal white head and snowy tail, soared or flapped lazily from range to range, seeming not to care to molest the industrious ospreys that used this most convenient fishing-ground. Now and then a sora could be startled from its haunts in the reeds, or a marsh wren would amuse us with its squeaky songs. Mallards were regularly feeding in the grass; while occasionally the booming of the American bittern announced its presence in the bog.

The forested margin of the lake was populous with birds. In the twilight depths the varied thrush flitted here and there; frequently a black-headed jay uttered his harsh warning, and watched the observer from a treetop. Pheasants, the gray ruffed grouse, were nesting commonly in the neighborhood. About our cabin Cassin's purple finch was a regular visitor. Indeed, it is certain that no other portion of the Flat-head lake region is tenanted by a greater number of species than the swampy area and the immediate neighborhood of Swan lake, and to make special mention of any inhabitants of the locality would serve only to mislead the reader regarding the occurrence of others.

Oological Notes.

Of several species, quite common throughout the Flathead region, no nests were met with in the seasons of 1900 and 1901. Notes made concerning such as were found nesting in 1902 may be of interest, though little new or unusual was observed in the nidification thus described.

A nest of the western robin, *Merula migratoria propinqua*, was found on May 31, at Polson. It was in a low crotch of a haw tree, and contained three eggs. Thinking that the set was incomplete, I visited the nest on the following morning to note progress, when I found only two eggs in the nest. It was evident that some marauder had despoiled the home of part of its contents. I was unable to follow the fate of the nest, but it is likely that on a future occasion, when the owner returned to her nest after an outing, she found it empty. Last season I noted a similar occurrence in the history of a nest of Wright's flycatcher, *Empidonax wrightii*. Each successive day the set showed a decrease of one egg, until finally only the empty nest remained. It would be interesting to know the particular despoiler of each of these wildwood homes.

In view of the extended notes given concerning the nidification of the olive-backed thrush, *Turdus ustulatus swainsonii*, in the larger bulletin, it may seem superfluous to add anything of like nature in these pages. However, the following may not be out of place. A deserted nest of olive-backed thrush was found on July 6, containing two eggs. The site was an upright crotch of a small fir, perhaps the lowest in my observation, the brim of the nest being not more than three feet from the ground.

Deserted nests of this thrush are chanced upon quite frequently. One fell under my notice on July 9, on the Helena club grounds near the road. It was in an upright crotch of a dead oblique fir, about seven feet from the ground. It was a very bulky nest, the walls averaging one and one-fourth inches in thickness. They were made of coarse dried grass, lichen, skeleton leaves, and punky material, the unfinished interior being mainly of skeleton leaves. This nest contained four eggs, rather advanced in incubation.

In several instances I have observed the olive-backed thrush sitting in the unfinished, empty nest. On July 6, I noticed a female sitting in a nest of which the foundation was scarcely laid. Apparently she was not working on the nest, shaping it to her form, but sitting quietly as if incubating. On July 19, I inspected this nest, and then it contained three eggs advanced in incubation. Once before this season I noticed a female sitting in her unfinished nest. It is worth mentioning that on both these occasions the day was showery, and the weather may have influenced the bird in its action.

As in each of the two preceding seasons, one nest of the willow thrush, *Turdus fuscescens salicicola*, was found, and the different site it occupied

makes it worthy of mention. It was in the swampy area west of the Station grounds, bordering the harbor. Instead of being situated near the ground, it was six and one-half feet above, in an upright crotch of an oblique thorny sapling. The nest was typical of the willow thrush in construction, but the site was so unusual in my experience that I collected the owner for complete identification. It was a bulky structure, made of coarse weed-stems, pine needles, and bark, lined with fine black rootlets. A large piece of green leaf, which had probably fallen into the nest, had been incorporated into the lining. The cavity averaged two and three-fourths inches in diameter, two inches deep. The eggs were unspotted, of the greenish-blue color characteristic of this species.

One nest of the long-tailed chickadee, *Parus atricapillus septentrionalis*, was found. It was at the head of Swan lake, on June 6, at which date the eggs were about ready to hatch. The site was an old cavity made by a small woodpecker or the owner, in an old decayed birch stump in the swampy margin of the lake. The nest was a soft bed of rabbit fur. There were seven eggs in the nest.

On July 1, a nest of Parkman's wren, *Troglodytes aedon parkmanii*, was examined. It was on the tract known as the "Big Burn," on the Mission slopes southeast of the Station, in a cavity made by a woodpecker in a decayed stump. The nest was made of dead twigs for a foundation, weed-fibers, soft feathers, and pieces of sloughed snake skin. There were two fresh eggs in this nest.

The catbird, *Galeoscoptes carolinensis*, nests very commonly in the region about Daphnia Pond. On July 7, I found my first nest of this species containing five eggs. One of these was infertile, and the others were quite advanced in incubation. The catbird prolongs its nesting season, though later sets of eggs contain less than the regular complement of four of earlier nesting. On July 16, we noted a nest containing three eggs, and on July 22 another nest was found with three eggs. All of these nests were in the low buckbrush growing so plentifully on the ridges near the Station.

A nest of the cedar waxwing, *Ampelis cedrorum*, seemed to indicate irregular habits of nidification of this species. The nest was noticed on June 27. It was situated in a fir in the edge of the Station grounds, near the top of the tree and about twelve feet from the ground. It was made on horizontal branches, against the main stem, from which site it was removed when first noticed, examined, and replaced to wait for later examination. It then contained three eggs. On June 30, it contained four eggs. On July 1, when the eggs were further examined, three of them were incubated very noticeably beyond the fourth, a condition showing that the eggs were not deposited on successive days, or that the three eggs had been incubated several days longer than the fourth.

The western vesper sparrow, *Pooecetes gramineus confinis*, nests abundantly near the shore of Flathead lake. In the meadow opposite to the store at Polson, five nests were found, and another nest was noted just outside the fence, in the bushes bordering the lake. On May 31, a nest was taken from a depression at the base of a grass tuft. It was made of coarse dried grass and horsehair. Cavity two and three-eighths inches

in diameter, depth one and one-half inches. The depression was on the shady and darkest side of the grass tuft. There were four eggs, fresh. The eggs of this sparrow are pale greenish-white, irregularly marked with spots of reddish-brown. On May 30, a nest of the western vesper sparrow was found in a depression at the base of a little bush, beside a path between the meadow and the lake. It contained three eggs, which were somewhat incubated. Another nest noted on May 31 with three eggs, on June 2, contained only two eggs. Another examined on June 2, contained one youngling just hatched, one egg breaking for the struggling occupant, and two eggs. Another nest noted on June 2, held four fresh eggs; another held four fresh eggs, and still another contained three eggs far advanced in incubation. All of these nests were made after a common plan of structure, and were on the darkest side of the tufts under which they were placed, a characteristic not usually noticeable in the sites of most of the ground-nesting species, and indeed not generally characteristic of the vesper sparrow.

Brewer's blackbird, *Scolecophagus cyanocephalus*, was commonly nesting in the low bushes near the lake shore at Polson. On May 31, a nest of this species was taken from a bush in a clump. The site was twelve inches from the ground, among upright stems. The nest was made of coarse weed-stems and twigs, with muddy material in the walls, and a bedding of horsehair. The cavity was three and three-fourths inches across, and two and three-fourths inches deep. This nest contained six eggs, partially incubated. A second nest contained three eggs of the owner and one of the cowbird. The eggs of Brewer's blackbird are dark greenish-white, variously marked with blotches of dark brown.

At Selish, a nest of the western meadowlark, *Sturnella magna neglecta*, was observed on the hillside back of the hotel. It was made in typical manner, of coarse dried grass, in a tuft of tangled dead and green grass, well arched at the top. There were five eggs, partially incubated. They were very handsomely marked, having large, bold blotches of reddish brown on a snowy background.

Traill's flycatcher, *Empidonax traillii*, has been mentioned as nesting throughout this region. On July 8, a nest of this flycatcher was found in a small fir in the edge of the Station grounds, within arm's reach of a path leading down into the swampy area. It was placed upright on horizontal twigs beside the main stem, six feet from the ground. When first noticed it contained three younglings about ready to leave the nest. In structure the nest is much like that of the yellow warbler, *Dendroica aestiva*, or that of Wright's flycatcher, *Empidonax wrightii*, being made of shavings of weed-stems, grass stems, and bits of gossamer. On July 6, after a cold rain of a week's duration, a nest of Traill's flycatcher was noticed containing three young birds about half fledged, dead, doubtless from exposure.

A nest of the western wood pewee, *Contopus richardsonii*, was noticed near the Station on July 8. It was in an aspen on the lake shore, saddled upon a dead branch at a fork about three feet from the main stem, and about fifteen feet from the water below. In attempting to examine it, I accidentally spilled the four eggs, and the nest dropped into the water

and was almost immediately disintegrated. The eggs were found to be far advanced in incubation. Another nest of this species was noted on July 17, in a large fir tree on the shore of the lake near the Station. It was about fifteen feet from the ground, near the extremity of a large dead horizontal branch, the site being at least ten feet from the trunk of the tree. As in the former instance, the nest was made upon a horizontal fork. Fearing that the accident in the former case might repeat itself, we did not attempt to examine this nest, and left the female sitting contentedly upon her breezy home. The eggs of the western wood pewee are creamy yellowish-brown, blotched irregularly with reddish-brown.

The western nighthawk, *Chordeiles virginianus henryi*, nests abundantly on the rocky ridges near the Station. A set of two eggs of this nighthawk was found June 26, on the rocky ridge west of the road leading to Holt. The sitting bird was startled within three feet of me as I ascended the rock. She flitted painfully away for about twenty feet, and sat fluttering for several minutes; then she fluttered over the edge of the cliff and disappeared. The eggs were on a portion of bare rock surrounded by brown moss, the bare spot being not more than three inches square. The eggs were advanced in incubation. They are a dark stone gray, variously marked with spots and blotches of dark brown. On July 1, I chanced upon a sitting nighthawk on the rocks east of Daphnia Pond. Upon being flushed, she flew away low and heavily. Only one egg was found, far advanced in incubation, and I fancied that the parent bird had carried away an egg or a young recently hatched. The egg was on the bare rock or earth which scantily covered the rock, though a few small sprouts were growing near. On July 19, a set of two fresh eggs was found on these rocks.

Several nests of the gray ruffed grouse, *Bonasa umbellus umbelloides*, were examined. One found on June 7, at the head of Swan lake, was made about eight feet from a trail used frequently by trappers. It was under the upturned end of a fallen log, in warm exposure, made of dead leaves in a depression, with half a dozen soft feathers. The depression measured seven inches across at the top, and was two and one-half inches deep. There were ten eggs, partially incubated. They are a light reddish-cream color, having few faint indistinct specks of reddish-brown. On June 15, a nest of this grouse was noted with six eggs. It was at the base of a small fir, made as before described, and like the other, it was near a trail and not closely concealed. On June 20, the nest was empty, the eggs having evidently hatched, and the place was deserted. Another nest of the ruffed grouse was found on June 16, in the edge of a small clearing on Swan lake. This nest was under the edge of a fallen log, among surrounding tangled weeds that most effectually concealed the nest. It held seven eggs which were thought to be about ready to hatch.

A small colony of Holboell's grebe, *Colymbus holboellii*, consisting of at least five pairs, was found nesting at the head of Swan lake. The first nest was found on June 4, among tall dead reeds. It was made of black decaying material, with some green reeds intermingled. The mass floated about four inches above water. The nest was in the edge of a clump of reeds, about which there was clear water all around. There

were five eggs, loosely covered with material similar to that of the nest. The eggs were partially incubated, and had acquired the browned, baked appearance peculiar to eggs of the grebes after lying some time in the nest. On June 7, a second nest of this grebe was found, situated in bushes on overflowed ground. It was made as usual of decaying material, with which some green reeds in short pieces were intermingled. This nest was founded on coarse dead twigs, probably brought up from the ground below. These eggs were also covered with material like that in the nest, the four eggs being somewhat advanced in incubation. Nest No. 3 was noted on June 17, with five eggs, uncovered, and quite fresh. They were of a pale greenish-white color, not having changed to the appearance described in a foregoing account. This nest was made as usual, anchored in the edge of old reeds. It is worth while to state that on June 12, this nest held two eggs, on June 14, three, and June 17, five. A fourth nest was noted June 17, with three eggs about half incubated. On June 18, another nest of Holboell's grebe was examined, which was in the willow bushes in the edge of the overflow area. It was made on depressed branches, a large strong nest, twenty-four inches across at the surface of the water, rising four inches above the water, with a cavity seven and one-half inches across, one and one-half inches deep. This nest was made as the others, of old reeds with some new material on top. There were four eggs, incubation far advanced. On June 20, a set of three eggs was found in a large nest anchored in the edge of a small clump of reeds, the eggs being partially incubated. The last nest of this series was examined June 20, and contained four fresh eggs. It was a large mass of dried decaying material anchored among thick reeds, with two opposite approaches through the reeds to open water. The eggs were not covered, but being fresh were of the bluish-white tinge.

On July 4, 1903, a nest of the Louisiana tanager was found in a tall fir tree in front of the Biological Station building. The birds were observed to frequent the place, and by close watching the female was seen to take her place upon the nest. It was about twenty-five feet from the ground, on a dwarf branch among others which were the lowest bearing vegetation. The site was a horizontal fork, and the nest was held in place by surrounding twigs. It was made outwardly of coarse forky twigs, the walls being chiefly made of fine rootlets, and there was a lining of horsehair. The cavity was two and three-fourths inches in diameter, and one and one-half inches deep. When the nest was collected the female was sitting, and she remained on the nest until I had nearly reached the branch. The tuft of twigs in which the nest was made was about four feet from the main stem. There were four eggs, about one-half incubated. They are pale bluish green, with specks of blackish brown distributed sparsely over the surface. When removed from its site, the loose twigs in the outer part of the nest fell away like that part of a grosbeak's nest.

On July 15, a nest of Townsend's warbler, *Dendroica townsendi*, was found in a clump of small firs on a rocky ridge of the Helena club grounds. The site was unusually low, being only six feet from the ground in a small fir surrounded by larger ones. The nest could be seen only by a person

pushing his way into the clump. It was made beside the main stem, situated like a chipping sparrow's nest, which it greatly resembled. It was made externally of coarse weed-stems and grasses, with a lining of fine grasses and horsehair. The cavity was two inches in diameter, and one and three-eighths inches deep. The nest contained five young which were nearly fledged, showing the black crown and yellow superciliary line, and wing bands. All the young were infested with a parasitic grub, which had eaten a hole in the skull and neck; it appeared that the brain had been entirely destroyed by the wriggling occupants of the cavity, though the younglings were apparently enjoying life and were eagerly stretching forth their mouths at the approach of the parents. The male seemed most active in bringing in supplies, and he was collected with little difficulty. The female was shyer, and only by considerable waiting and watching was the collector able to secure her.

On July 6, 1903, a nest of the ruby-crowned kinglet, *Regulus calendula*, was collected, with both parent birds. This nest was along a road through the Helena club grounds. It was situated about fifteen feet from the ground, near the extremity of a branch of a medium-sized fir tree. The site was six feet from the main stem. The nest was partially saddled on an oblique twig on the under side of the branch, and was also somewhat pendent from several smaller twigs about which the walls were woven. The nest was four inches in diameter externally, and three inches deep. The opening was two and one-fourth inches across, and the cavity was one and seven-eighths inches deep. The nest walls were made of dark green lichens common in the tamarack forest, deer hair, gossamer, and shreds of bark. The lining was made of hair, soft downy feathers, and lichen. There were eight young in the nest, ready to leave in two or three days at most.

Notes on New Birds.

167. Ruddy Duck, *Erismatura jamaicensis* (Gmel.)

This handsome little duck was met with in the summer of 1901, on a small pot-hole on the Flathead reservation. The watery area was about an acre in extent, margined by a thick growth of grass. As we passed it somewhat hurriedly, we noticed several ducks on the water. Loitering behind the others, I made a circuit of the pond, and at one place I came upon a wounded duck crouching in the grass, almost under my feet. Before I could capture it, the duck revived and swam out into the deeper water. However, I could not fail to recognize the reddish-chestnut of the back, and the black of the head, nor the little tail left so jauntily erect. Indeed, I was stooping to pick up the duck when it glided away from my reach. It is likely that several pairs of this duck were nesting on the little pond where they were seen.

206. Sandhill Crane, *Grus mexicana* (Mull.)

The sandhill crane was observed in both the seasons of 1901 and 1902. In the former summer, on July 29, a pair of these cranes was observed standing on a stranded tree near the mouth of Flathead river. I tried to secure a specimen with the shotgun, but the great birds paid no attention to my No. 6 shot. These birds lingered near the mouth of the river for several days, but they were too wary to be taken. In 1902, when we were encamped at the head of Swan lake, July 26, a sandhill crane flew overhead, circling somewhat uneasily about the place, and finally alighted in the meadow, but was not thereafter observed.

221. American Coot, *Fulica americana* Gmel.

The American coot eluded our notice until the spring of 1902, when it was observed in the swamp at the head of Swan Lake. On the morning of June 6, two individuals were seen feeding, and as they paid little attention to our quiet movements in a skiff, we watched them for some time with considerable interest. Hoping that they might be nesting in the swamp, I refrained from taking a specimen at that time. However, they were not seen again, and there was no evidence of their nesting there. We were told by trappers in the neighborhood that the coots assembled in the swamp in the fall in hundreds.

225. American Avocet, *Recurvirostra americana*.

The American avocet was not noted in the Flathead region until 1903, when a single specimen was observed on August 11, at the mouth of Flathead river. It was feeding on the sand-bar in company with several Baird's sandpipers and some ring-billed gulls. An effort was made to secure it, but it flew away with a broken leg and we were unable to

capture it. However, there can be no doubt regarding the identification, as the species is well-known to me from previous observation.

357. Pigeon Hawk, *Falco columbarius* Linn.

A fine specimen of pigeon hawk was taken on the Station grounds on July 19. It flew into one of the trees soon after sunset, moving restlessly from one tree to another until my attention was directed to it. My first impression was that it was a sparrow hawk, but thinking best to secure it, I caught it by a lucky shot as it was leaving the grounds. It presented the following measurements: length, 11.15 inches; wing, 7.80 inches; tarsus, 1.30 inches; culmen to cere, .50 inch; tail, 5 inches; middle toe to claw, 1.15 inches; extent of wings, 23 inches. Iris, brown; cere, tarsi, and feet, yellow; mandible, greenish-yellow basally, bluish horn at tip. The specimen proved to be a male, and was in splendid plumage in almost perfect coloration.

358. Richardson's Merlin, *Falco richardsonii* Ridg.

A male of this species was taken at the head of Swan lake on July 26. It was apparently a young of the year, as the rusty markings predominated in its plumage. The specimen presented the following approximate measurements: length, 12.50 inches; wing, 8.60 inches; tail, 5.75 inches; tarsi, 1.35 inches; culmen to cere, .55 inches; middle toe to claw, 1.32 inches.

379. Pygmy Owl, *Glaucidium gnoma* Wagl.

This interesting little owl occurs regularly throughout the wooded parts of the Flathead lake region, but it eluded our notice until 1902. During the protracted rains of the first week of July, we were kept generally indoors, but in an afternoon walk between showers, Mr. Ricker saw a specimen of this owl near the Station and described it very accurately to me. It was not until July 17, that it chanced under my observation, when three specimens were taken from a family which was taking an afternoon outing along the road through the woods south of the bridge at Bigfork. One of the owls was sitting in a small tamarack beside the road, almost within reach of passing teamsters. When it was shot, the others flew from perches nearby, and alighted in the largest trees not far away. They perched in each instance on horizontal branches close to the main trunk. When flushed, they uttered a faint shrill whistling call. One of the family, the female in charge of the youngsters, uttered a low cooing whistle, in low pitch.

It was reported to me that specimens of the pygmy owl were at Kalispell. Mr. Ernest Bond also told me that this owl was frequently taken at the head of Swan lake. (It is also found at Missoula. M. J. E.)

497. Yellow-headed Blackbird, *Xanthocephalus xanthocephalus*.

This species was found sparingly in the swamp at the head of Swan lake, the first being noted June 7, when both males and females were seen. Thereafter specimens were seen every day that we visited the swamp, until June 21, during which time the males were in song. As far as I could observe, there were no nests in the swamp. No specimens were taken, as I did not wish to interfere with the nesting of this species by sacrificing the lives of any of the colony.

675a. Grinnell's Water-Thrush. *Seiurus noveboracensis notabilis*.

This water-thrush was heard regularly in the swampy woods at the head of Swan lake, singing cheerily from the tangled bushes, but it managed to elude capture until July 10, 1903, when it was still in song. It was also heard in the swamp-woods near the mouth of Swan river. There is no doubt that Grinnell's water-thrush breeds in suitable localities in the Flathead region.

725c. Western Marsh Wren. *Cistothorus palustris plesius* Ober.

A specimen of this wren was taken in the marsh at the head of Swan lake, July 26. It was singing vigorously, and near it an unfinished nest was found, the only evidence of its nesting.

763. Varied Thrush. *Ixoreus naevius* (Gmel.)

The varied thrush was found to be common at the head of Swan lake, where it flitted in the dark forest of the mountain-sides. An old nest was brought to me, containing fragments of shells easily indentifiable. The nest was made like one of the olive-backed thrush, outwardly of twigs and lichens, lined with soft whitish fibers. It is reported to nest very early. The trappers in the neighborhood, and the person who brought me the nest, asserted that this species is a winter resident as well in this region.

List of Birds.

List of the Summer Birds of Flathead lake, including those given in the former bulletin and those added by the present bulletin.

1. *Colymbus holboellii*. Holboel's Grebe. A small colony found breeding at the head of Swan lake, 1902.

2. *Colymbus nigricollis californicus*. American Eared Grebe. Young reared in Sinyaleamin lake, Missoin Mts., 1901. Also at Rost lake.

3. *Urinator imber*. Loon. Common, breeds.

4. *Urinator lumme*. Red-throated Loon. Specimens taken at Flathead lake and at Rost lake, 1901.

5. *Larus occidentalis* (?). Western Gull. One specimen, doubtfully identified, taken at the mouth of Flathead river.

6. *Larus delawarensis*. Ring-billed Gull. Common at Flathead lake.

7. *Sterna forsteri*. Forster's Tern. One specimen taken from a small flock, Aug. 23.

8. *Merganser americanus*. American Merganser. Noted regularly after Aug. 23, 1901.

9. *Lophodytes cucullatus*. Hooded Merganser. A female taken July 15, 1901, at Rost lake.

10. *Anas boschas*. Mallard. Common, breeds.

11. *Nettion carolinensis*. Green-winged Teal. Common after the middle of August.

12. *Dafila acuta*. Pintail. Common, breeds.

13. *Aix sponsa*. Wood Duck. A male young-of-the-year taken July 31, 1901, from a small flock.

14. *Clangula clangula americana*. American Golden-eye. The commonest of the breeding ducks of the region, seen on every little body of water.

15. *Charionetta albeola*. Buffle-head. Not common, breeds.

16. *Erismatura jamaicensis*. Ruddy Duck. Found breeding on the pot-holes of the reservation.

17. *Branta canadensis*. Canada Goose. Common, breeds.

18. *Botaurus lentiginosus*. American Bittern. Common, breeds.

19. *Grus mexicana*. Sandhill Crane. A pair seen July 29, 1901, at the mouth of Flathead river.

20. *Porzana carolina*. Sora. Common, breeds.

21. *Fulica americana*. American Coot. Seen only at the head of Swan lake early in June, 1902.

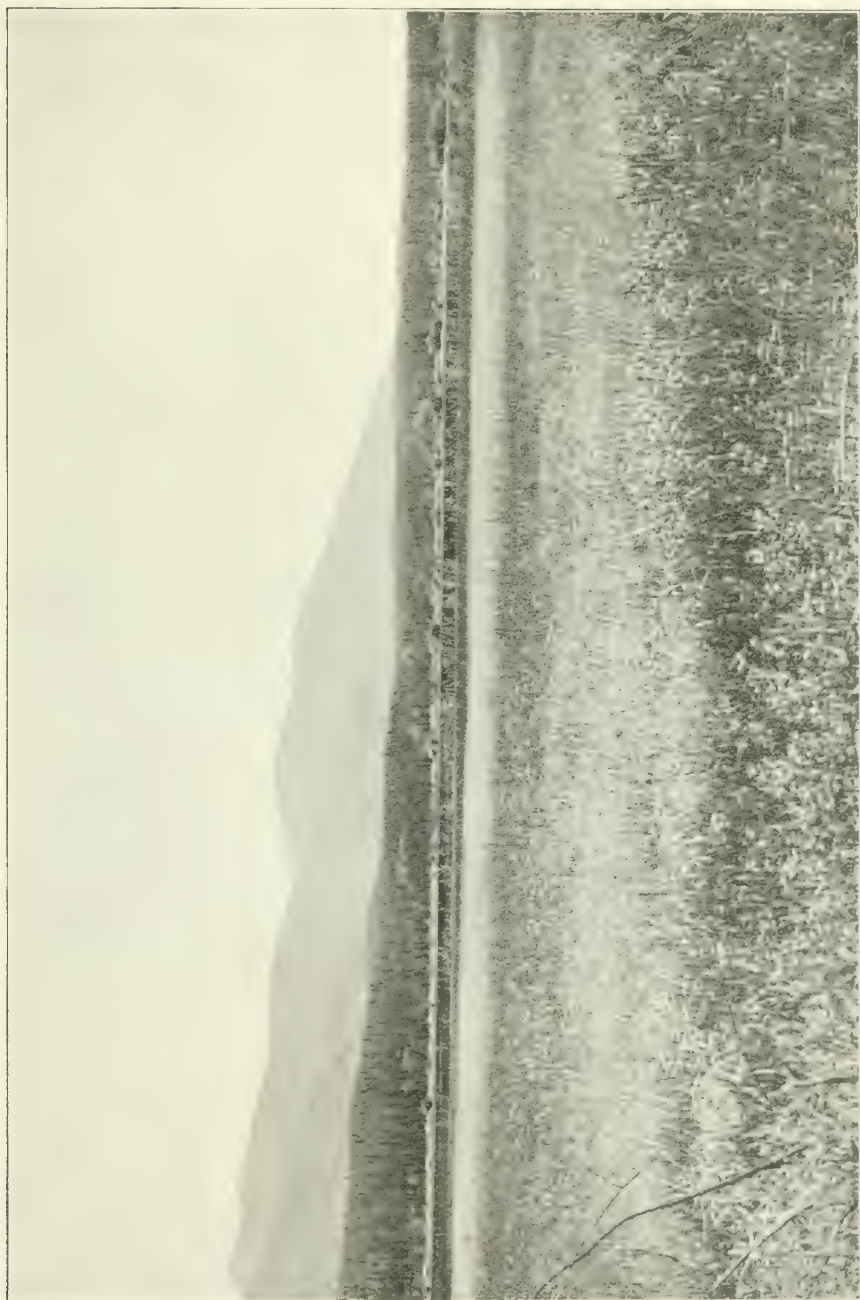
22. *Phalaopus lobatus*. Northern Phalarope. A specimen taken on Flathead lake August 27, 1900.

23. *Gallinago delicata*. Wilson's Snipe. Common after the middle of July.
24. *Tringa bairdii*. Baird's Sandpiper. Occurs regularly after the middle of August.
25. *Calidris arenaria*. Sanderling. Common toward the end of August.
26. *Totanus melanoleucus*. Greater Yellowlegs. Common.
27. *Totanus flavipes*. Yellow-legs. Common.
28. *Helodromus solitarius*. Solitary Sandpiper. Occurs regularly toward the end of July and thereafter.
29. *Bartramia longicauda*. Bartramian Sandpiper. Occurs locally, breeds.
30. *Actitis macularia*. Spotted Sandpiper. Abundant, breeds.
31. *Numenius longirostris*. Long-billed Curlew. Common, breeds.
32. *Aegialitis vocifera*. Killdeer. Common, breeds.
33. *Colius virginianus*. Bob-white. Introduced, increasing between Bigfork and Kalispell.
34. *Dendragapus ogseurus richardsonii*. Richardson's Grouse. Occurs in the mountains near the lake.
35. *Dendragapus franklinii*. Franklin's Grouse. Occurs in the higher mountains.
36. *Bonasa umbellus umbelloides*. Gray Ruffed Grouse. Abundant.
37. *Pedioecetes phasianellus columbianus*. Columbian Sharp-tailed Grouse. Abundant in the open prairie regions.
38. *Zenaidura macroura*. Mourning Dove. Occurs regularly, but not numerous, breeds.
39. *Circus hudsonius*. Marsh hawk. Common at the foot of Flat-head lake.
40. *Accipiter velox*. Sharp-shinned Hawk. Common, breeds.
41. *Accipiter cooperii*. Cooper's Hawk. Not numerous, breeds.
42. *Buteo borealis calurus*. Western Red-tail. Not uncommon, breeds.
43. *Archibuteo lagopus sancti-johannis*. American Rough-legged Hawk. Seen frequently in flight high overhead.
44. *Aquila chrysaetos*. Golden Eagle. Common.
45. *Haliaeetus leucocephalus*. Bald Eagle. Several pairs living in this region.
46. *Falco columbarius*. Pigeon Hawk. A fine specimen taken July 19, 1902.
47. *Falco richardsonii*. Richardson's Merlin. A young of the year taken at Swan lake, July 26, 1902.
48. *Falco sparverius deserticolus*. Desert Sparrow Hawk. Abundant.
49. *Pandion haliaetus carolinensis*. American Osprey. Common, breeds.
50. *Asio wilsonianus*. Long-eared Owl. One specimen seen at Selish.
51. *Megascops asio maxwelliae*. Rocky Mountain Screech Owl. A specimen taken at Post creek, on the reservation.

52. *Bubo virginianus subarcticus*. Western Horned Owl. Common in the wooded districts.
53. *Glaucidium gnoma*. Pygmy Owl. Several specimens taken in 1902.
54. *Ceryle alcyon*. Belted Kingfisher. Abundant.
55. *Dryobates villosus hyloscopus*. Cabanis's Woodpecker. Common.
56. *Dryobates pubescens oreocercus*. Bacheider's Woodpecker. Common.
57. *Picoides arcticus*. Arctic Three-toed Woodpecker. Not uncommon.
58. *Picoides americanus dorsalis*. Alpine Three-toed Woodpecker. Not uncommon.
59. *Sphyrapicus varius nuchalis*. Red-naped Sapsucker. Common, breeds.
60. *Ceophloeus pileatus*. Pileated Woodpecker. Common in the heavy woodlands.
61. *Melanerpes torquatus*. Lewis's Woodpecker. Common.
62. *Colaptes cafer*. Red-shafted Flicker. Abundant.
63. *Chordeiles virginianus henryi*. Western Nighthawk. Abundant.
64. *Selasphorus rufus*. Rufous Hummingbird. Common, breeds.
65. *Stellula calliope*. Calliope Hummingbird. Not uncommon.
66. *Tyrannus tyrannus*. Kingbird. Abundant, breeds.
67. *Tyrannus verticalis*. Arkansas Kingbird. Common, locally, breeds.
68. *Contopus borealis*. Olive-sided flycatcher. Not uncommon on the mountain slopes.
69. *Contopus richardsonii*. Western Wood Pewee. Common.
70. *Empidonax traillii*. Traill's Flycatcher. Common.
71. *Empidonax wrightii*. Wright's Flycatcher. Common.
72. *Otocoris alpestris arenicola*. Desert Horned Lark. Abundant on the prairies.
73. *Pica pica hudsonica*. American Magpie. Very common, breeds.
74. *Cyanocitta stelleri annectens*. Black-headed Jay. Common, breeds.
75. *Perisoreus canadensis capitalis*. Rocky Mountain Jay. Common.
76. *Corvus corax sinuatus*. American Raven. Not uncommon.
77. *Corvus americanus*. American Crow. Generally distributed.
78. *Nucifraga columbiana*. Clarke's Nutcracker. Common in the mountains.
79. *Dolichonyx oryzivorus*. Bobolink. Common in the fall on the reservation.
80. *Molothrus ater*. Cowbird. Not common.
81. *Xanthocephalus xanthocephalus*. Yellow-headed Blackbird. Seen only at Swan lake.
82. *Agelaius phoeniceus*. Red-winged Blackbird. Not very common.
83. *Sturhella magna neglecta*. Western Meadowlark. Abundant.
84. *Spinus pinus*. Pine Siskin. Abundant, breeds.
85. *Scolecophagus cyanocephalus*. Brewer's Blackbird. Abundant, breeds.

86. *Coccothraustes vespertinus montanus*. Western Evening Grosbeak. Very common in 1901 in the vicinity of the Station.
87. *Carpodacus cassini*. Cassin's Purple Finch. Common at the head of Swan lake.
88. *Loxia curvirostra minor*. American Crossbill. Generally common in late summer.
89. *Spinus pinus*. Pine Siskin. Abundant, breeds.
90. *Poocetes gramineus confinis*. Western Vesper Sparrow. Abundant, breeds.
91. *Ammodramus savannarum perpallidus*. Western Grasshopper Sparrow. Common.
92. *Spizella socialis arizonae*. Western Chipping Sparrow. Abundant, breeds.
93. *Junco hyemalis shufeldti*. Shufeldt's Junco. Common, breeds.
94. *Melospiza melodia montana*. Mountain Song Sparrow. Common, breeds.
95. *Melospiza lincolni*. Lincoln's Sparrow. Not common.
96. *Melospiza georgiana*. Swamp Sparrow. One specimen taken Aug. 11, 1900, from a group of three or four.
97. *Passerella iliaca schistacea*. Slate-colored Sparrow. Found breeding in the woods at the base of McDougal Peak.
98. *Pipilo maculatus arcticus*. Arctic Towhee. Common, breeds.
99. *Habia melanocephala*. Black-headed Grosbeak. Common, breeds.
100. *Cyanospiza amoena*. Lazuli Bunting. Common, breeds.
101. *Pirang ludoviciana*. Louisiana Tanager. Abundant, breeds.
102. *Petrochelidon lunifrons*. Cliff Swallow. Common.
103. *Hirunda erythrogaster*. Barn Swallow. Common, breeds.
104. *Tachycineta bicolor*. Tree Swallow. Common, breeds.
105. *Clivicola riparia*. Bank Swallow. Common, breeds.
106. *Ampelis cedrorum*. Cedar Waxwing. Abundant, breeds.
107. *Vireo olivaceus*. Red-eyed Vireo. Common, breeds.
108. *Vireo gilvus*. Warbling Vireo. Common, breeds.
109. *Dendroica aestiva*. Yellow Warbler. Abundant, breeds.
110. *Dendroica auduboni*. Audubon's Warbler. Common, breeds.
111. *Dendroica townsendi*. Townsend's Warbler. Abundant, breeds.
112. *Geothlypis macgillivrayis*. Macgillivray's Warbler. Common, breeds.
113. *Geothlypis trichas occidentalis*. Western Yellow-throat. Common, breeds.
114. *Icteria virens longicauda*. Long-tailed Chat. Abundant at Selish, on reservation, and at Bigfork.
115. *Sylvania pusilla*. Wilson's Warbler. Found nesting at McDonald lake, June 24, 1901.
116. *Setophaga ruticilla*. American Redstart. Abundant, breeds.
117. *Cinclus mexicanus*. American Dipper. Common, breeds.
118. *Galeoscoptes carolinensis*. Catbird. Common, breeds.
119. *Salpinctes obsoletus*. Rock Wren. Common.

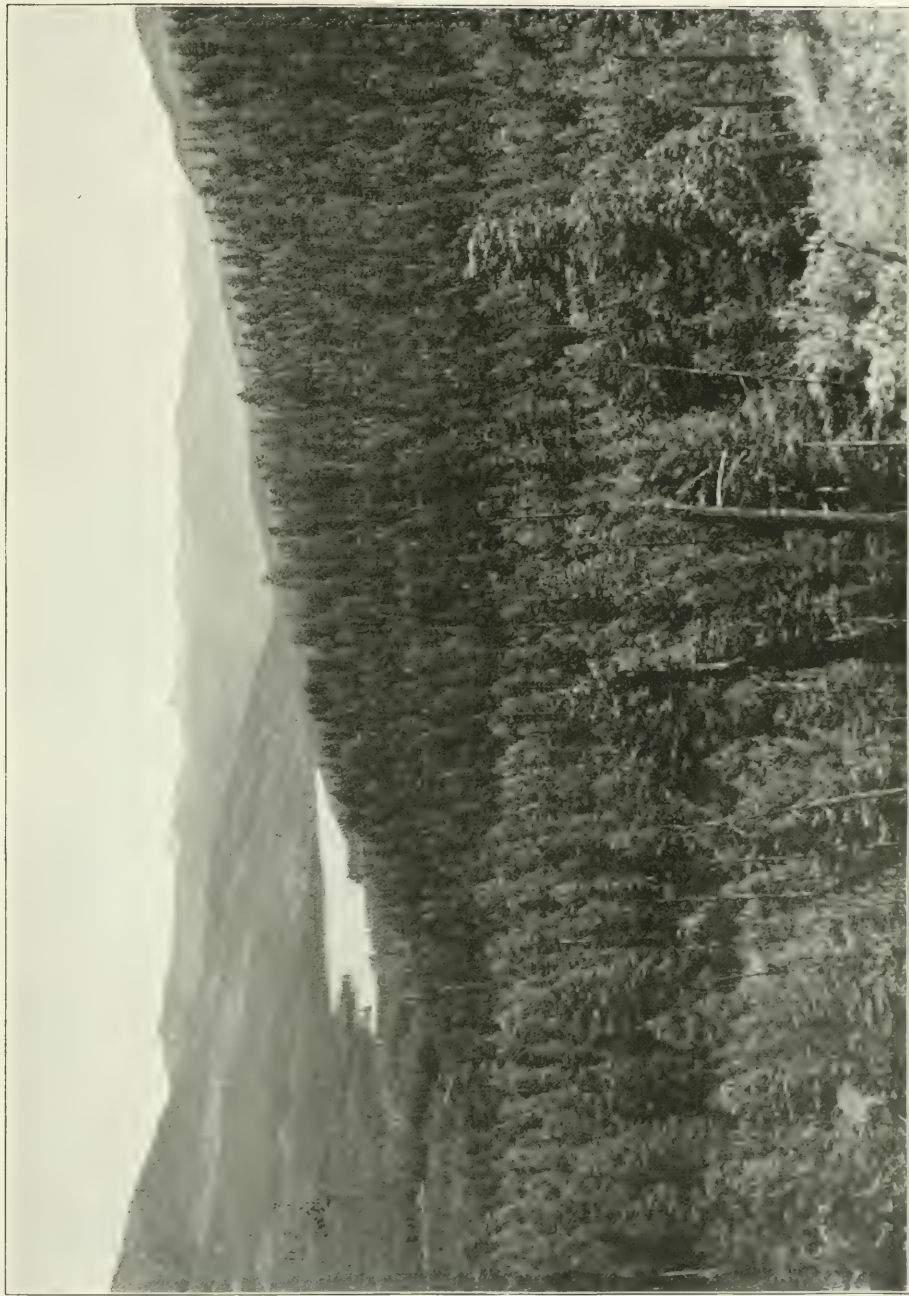
120. *Troglodytes aedon aztecus*. Western House Wren. Common, breeds.
121. *Troglodytes hiemalis pacificus*. Western Winter Wren. Common.
122. *Cistothorus palustris plesius*. Western Marsh Wren. Noted only at the head of Swan lake, 1902.
123. *Certhia familiaris montanus*. Rocky Mountain Creeper. Common.
124. *Sitta carolinensis aculeata*. Slender-billed Nuthatch. Common.
125. *Sitta canadensis*. Red-breasted Nuthatch. Common.
126. *Parus atricapillus septentrionalis*. Long-tailed Chickadee. Common, breeds.
127. *Parus gambeli*. Mountain Chickadee. One specimen noted on McDougal Peak. Breeds at Bigfork.
128. *Regulus satrapa*. Golden-crowned Kinglet. Common.
129. *Regulus calendula*. Ruby-crowned Kinglet. Common, breeds.
130. *Myadestes townsendii*. Townsend's Solitaire. Common, breeds.
131. *Hylocichla fuscescens salicicola*. Willow Thrush. Not uncommon, breeds.
132. *Hylocichla ustulatus swainsonii*. Olive-backed Thrush. Abundant, breeds.
133. *Merula migratoria propinqua*. Western Robin. Abundant, breeds.
134. *Ixoreus naevius*. Varied Thrush. Common at the head of Swan lake, breeds.
135. *Sialia arctica*. Mountain Bluebird. Common.
136. *Recurvirostra americana*. American Avocet. Only one specimen observed, Flathead river, 1903.
137. *Seiurus noveboracensis notabilis*. Grinnell's Water-Thrush. Common, in swampy woods. Breeds.



Swamp at upper end of Swan Lake. Note the vegetation surrounding a stretch of open water, behind which is a fringe of willows, alders and swamp birches. Compare with Plate LIII. Southern end of Swan Range in the background. Photo in July, 1902, by M. J. Elrod. The view is S. E.



Showing height and density of the vegetation in the swamp at the upper end of Swan Lake. Photo by Maurice Ricker.



View of lower end of Swan Lake, from low summit of Mission Range, near the Laboratory. Most of the lake is hidden by the mountain slope. Note the dense forest on all sides. The first snow mountain on the left is Hall Peak. Photo in July, 1902, by M. J. Elrod. The view is a little east of south.



View from summit of Hall's Peak, looking southeast, across the densely wooded valley above Swan Lake, toward Mission Range. The high snow-clad summit on the right is McDonald. Swan River meanders through the wooded valley. Photo by M. J. Elrod, July, 1902.

Bulletins of the University of Montana, Biological Series.

No. 1. Summer Birds of Flathead Lake, by P. M. Silloway. 84 pp., Plates I—XVI.

No. 2. Announcement of the Fourth Annual Session of the University of Montana Biological Station. 4 pp.

No. 3. A Biological Reconnaissance in the Vicinity of Flathead Lake, by Morton J. Elrod. Pp. 89—18-21, plates XVIII—XLVI, figs. 1—3.

No. 4. Announcement of the Fifth Annual Session of the University of Montana Biological Station. Pp. 183—190, 4 ills.

No. 5. Lectures Delivered at the University of Montana Biological Station during the Session of 1902. Pp. 191—288, plates XLVII—LII, figs. 4—31.

No. 6. Additional Notes to Summer Birds of Flathead Lake, by Perley Milton Silloway, with Introduction by Morton J. Elrod. Pp. 289—308, plates LIII—LVII.